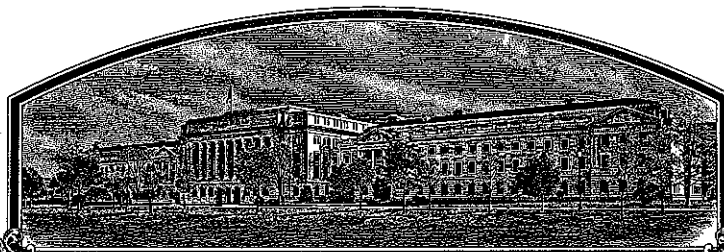


No.

200300149



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Pure Seed Testing, Inc.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLACEMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE FOREGOING PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

BLUEGRASS, KENTUCKY

'Midnight Star'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this sixteenth day of July, in the year two thousand and eight.

Attest:

Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

Secretary of Agriculture

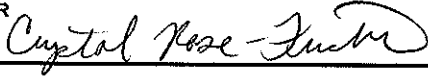

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

## APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

1. NAME OF OWNER <b>Pure Seed Testing, Inc.</b>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME <b>PST-A6-214</b>		3. VARIETY NAME <b>Midnight Star</b>	
4. ADDRESS (Street and No., or RFD No., City, State, and ZIP Code, and Country) <b>P.O. Box 449 Hubbard, OR 97032</b>		5. TELEPHONE (Include area code) <b>(503) 263-0719</b>		FOR OFFICIAL USE ONLY PVPO NUMBER <b>200300149</b>	
		6. FAX (Include area code) <b>(503) 263-0703</b>		FILING DATE <b>February 10, 2003</b>	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) <b>Corporation</b>		8. IF INCORPORATED, GIVE STATE OF INCORPORATION <b>Oregon</b>		9. DATE OF INCORPORATION <b>1975</b>	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)					
<b>Melodee L. Fraser, Ph.D. Pure Seed Testing, Inc. P.O. Box 176 Rolesville, NC 27571</b>		<b>Crystal Rose-Fricker Pure Seed Testing, Inc. P.O. Box 449 Hubbard, OR 97032</b>		FILING AND EXAMINATION FEES: <b>\$ 2705<sup>-</sup></b>  DATE <b>2/10/03</b> CERTIFICATION FEE: <b>\$ 768.00</b>  DATE <b>6/23/2008</b>	
11. TELEPHONE (Include area code) <b>(919) 556-0146</b>		12. FAX (Include area code) <b>(919) 556-0174</b>		13. E-MAIL <b>mlkfraser@aol.com</b>	
				14. CROP KIND (Common Name) <b>Kentucky bluegrass</b>	
18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)					
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)					
19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act. <input type="checkbox"/> YES (If "yes," answer items 20 and 21 below) <input checked="" type="checkbox"/> NO (If "no," go to item 22)					
20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED					
21. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1, 2, 3, etc. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)					
22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)					
23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)					
24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue will be deposited in a public repository and maintained for the duration of the certificate.  The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.  Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.					
SIGNATURE OF OWNER 			SIGNATURE OF OWNER 		
NAME (Please print or type) <b>Crystal Rose-Fricker</b>			NAME (Please print or type) <b>Melodee L. Fraser</b>		
CAPACITY OR TITLE <b>President</b>		DATE <b>02/06/03</b>		CAPACITY OR TITLE <b>Director of Research-East</b>	
				DATE <b>5 Feb 03</b>	

**Exhibit A – Revised September 2007****Origin and Breeding History of 'Midnight Star' Kentucky Bluegrass**

'Midnight Star' (PST-A6-214) Kentucky bluegrass originated as a single highly apomictic selection from a 'Midnight' plant open-pollinated in the greenhouse during the spring of 1995. Seeds harvested from the open-pollinated Midnight plant were planted during the fall of 1995 into a spaced-plant nursery in Oregon. During the summer of 1996, a morphologically distinct hybrid plant was selected from these plants and labeled A6-214. This plant was dark green and stripe rust resistant.

Seed was harvested from plant A6-214 and 10 plants were established during the fall of 1996 to determine the uniformity of the hybrid. During the summer of 1997, PST-A6-214 was determined to be facultatively apomictic with approximately 88% of its progeny appearing genetically identical to the maternal plant.

From 1996 to 1999, PST-A6-214 was evaluated for seed yield and turf performance. During the fall of 1999 a Breeder seed nursery of 505 plants was established. Seed was subsequently harvested from 445 plants during the summer of 2000 to produce Breeder seed of Midnight Star.

Seed production of Midnight Star is limited to three generations of increase from Breeder seed: one each of Foundation, Registered, and Certified. Pure-Seed Testing, Inc. maintains Breeder seed in Oregon and will regenerate as necessary. Midnight Star has shown stability and uniformity multiplied from Breeder seed through the Certified seed generation. No variants have been observed in the replication or multiplication of Midnight Star Kentucky bluegrass.

**Exhibit B****Statement of Distinctness for 'Midnight Star' Kentucky Bluegrass**

'Midnight Star' is most similar to 'Midnight' Kentucky bluegrass. They differ in the following characteristics:

1. Midnight Star has a mean plant height at least 20 cm taller than Midnight (Tables 1, 2).
2. Midnight Star has a mean flag leaf height at least 7 cm taller than Midnight (Tables 1, 2).
3. Midnight Star has a mean flag leaf sheath length at least 2 cm longer than Midnight (Tables 1, 2).
4. Midnight Star has a mean length from flag leaf to panicle top at least 8 cm longer than Midnight (Tables 1, 2).
5. Midnight Star has a mean tiller leaf length at least 1 cm longer than Midnight (Tables 1, 2).
6. Midnight Star has a mean tiller leaf width at least 0.4 mm wider than Midnight (Tables 1, 2).
7. Midnight Star has a mean flag leaf width at least 0.5 mm wider than Midnight (Tables 1, 2).
8. Midnight Star has a mean initial heading date 13 days earlier than Midnight (Tables 3, 4).

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

**U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY PROGRAM  
PLANT VARIETY PROTECTION OFFICE  
BELTSVILLE, MD 20705**

**EXHIBIT C  
(BLUEGRASS)**

**OBJECTIVE DESCRIPTION OF VARIETY  
BLUEGRASS  
(*Poa* spp.)**

NAME OF APPLICANT(S)  <b>Pure Seed Testing, Inc.</b>	TEMPORARY DESIGNATION  <b>PST-A6-214</b>	VARIETY NAME  <b>Midnight Star</b>
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code)  <b>P.O. Box 449, Hubbard, OR 97032</b>		FOR OFFICIAL USE ONLY PVPO NUMBER  <b>#200300149</b>

Select the number which characterizes the variety in the features described below. For measured characteristics use leading zeros as necessary in order to fill all blanks (e.g. 089). Those characteristics marked with a star \* are preferred to be recorded. Any others should be recorded to help establish novelty or uniqueness. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Measured data should be for SPACED PLANTS. Royal Horticultural Society or any recognized color fan may be used to determine plant colors; designate the system used:

Describe location of test area, conditions, and number of Plants used: **Pure Seed Testing Research Farm near Hubbard, OR. Sixty plants measured from seed yield trials planted in a randomized complete block with three replications of 20 plants each.**

1. SPECIES:

1 = *Poa compressa*

2 = *P. pratensis*

3 = *P. trivialis*

4 = Others (Please Specify):

Chromosome Number

2. ADAPTATION: (0 = Not Tested, 1 = Not Adapted, 2 = Adapted, 3 = Well Adapted)

Northeast

Transitional Zone

Southeast

North Central

Pacific N.W.

Intermountain

Southwest (CA, AZ)

Other (Please Specify):

3. MATURITY (At first anthesis): Give test area near Hubbard, Oregon.

\*

1 = Very Early

2 = Early (Delta, Mystic)

3 = Medium Early (Fylking, Nugget)

4 = Medium late (Newport, Adelphi, Aquila)

5 = Late (Merion, Baron, Enmundi)

6 = Very Late (Pacific)

Date of First Anthesis: \_\_\_\_\_

Number of days earlier than

\*

Maturity same as

\*

Number of days later than

\*

1 = Nugget

2 = Fylking

3 = Delta

4 = Merion

5 = Newport

6 = Baron

7 = Mystic

8 = Sabre

9 = Reubens

4. PLANT HEIGHT (At maturity-Average of longest shoot of 10 plants from soil surface to top of panicle): *Test Area* **Hubbard, OR**

★  1 = Short 2 = Medium short (Baron, Fylking, Mystic) 3 = Medium tall (Merion, Adelphi) 4 = Tall (delta) 5 = Very tall

#200300149

★    cm Height

cm Shorter than

Height same as

cm Taller than

★  } 1 = Nugget 2 = Fylking 3 = Delta

★  } 4 = Merion 5 = Newport 6 = Baron

★  } 7 = Mystic 8 = Sabre 9 = Reubens

5. GROWTH HABIT:

★  Habit: 1 = Prostrate (Nugget) 2 = Semiprostrate (Merion) 3 = Erect (Delta)

cm Amount of spread by rhizomes in 1 year (give test area: \_\_\_\_\_)

6. LEAF BLADE:

★  Green color: 1 = Light green (Mystic) 2 = Medium green (Fylking, Bonnieblue) 3 = Moderately dk. green (Merion, Adelphi) 4 = Very dk. green (Nugget, Glade, Enmundi)

★  Bluegreen color: 1 = Not bluegreen (Mystic, Touchdown, Parade) 2 = Moderately bluegreen (Merion, A-34) 3 = Bluegreen (Nugget, Enmundi, Adelphi) 4 = Strongly bluegreen (Majestic)

Winter color: 1 = Light green 2 = Dark green 3 = Light purple 4 = Dark purple 5 = Not purple 6 = Not green or purple

★  Hairs upper side: 1 = Absent (Nugget) 2 = Sparse (Merion) 3 = Dense (Park)

Hairs lower side: 1 = Absent (Fylking, Merion) 2 = Sparse 3 = Dense (Nugget)

Luster upper side: 1 = Shiny (Eclipse, Enmundi) 2 = Dull (Aquila, Parade)

Luster lower side: 1 = Shiny (Mystic, Enmundi) 2 = Dull (Barbie, Eclipse)

★  Margin hairs (Fringe on Margin or Base): 1 = Absent (Delta) 2 = Present (Fylking, Merion)

★  Width: 1 = Very fine (Mystic) 2 = Fine (Nugget) 3 = Medium (Merion, Fylking) 4 = Broad (Adelphi, Baron) 5 = Very broad (Monopoly)

mm Width (tiller leaf)

mm Narrower than

Width same as

mm Wider than

mm Length (tiller leaf)

mm Shorter than

Length same as

mm Longer than

★  } 1 = Nugget 2 = Fylking 3 = Delta

★  } 4 = Merion 5 = Newport 6 = Baron

★  } 7 = Mystic 8 = Sabre 9 = Reubens

★  } 1 = Nugget 2 = Fylking 3 = Delta

★  } 4 = Merion 5 = Newport 6 = Baron

★  } 7 = Mystic 8 = Sabre 9 = Reubens

1

Position of flag leaf (angle to stem):

1 = Appressed

#200300149  
2 = Open angle, yet stiff

3 = Nodding

7.

LEAF SHEATH:

7

cm sheath length

★

Seedling Color (base of sheath):

1 = Green (Nugget, Merion)

2 = Red (Delta)

★ 1

Hairs on Margin:

1 = Absent (Fylking)

2 = Present (Nugget)

★ 1

Margin Roughness (to touch):

1 = Smooth (Delta)

2 = Rough (Sabre)

1

Hairs on Surface:

1 = Absent ( )

2 = Present (Nugget)

1

Surface Roughness (to touch):

1 = Smooth (Fylking)

2 = Rough (Ram I)

1

Hairs on both sides just beneath leaf blade (under collar):

1 = Absent (Merion)

2 = Present (Nugget)

★ 1

Hairs on ligule:

1 = Absent (Fylking)

2 = Short (Baron)

3 = Long (Nugget)

1

Glaucosity:

1 = Absent (Mystic, Enmundi)

2 = Present (Birka)

2

Keel:

1 = Absent (Ram I)

2 = Present (Adelphi)

8.

PANICLE (Mature Plant):

0 8 2

mm Length (Lowest branch whorl to top, for 10 plants) Test Area:

mm Shorter than

★

1 = Nugget

2 = Fylking

3 = Delta

Panicle same as

★

4 = Merion

5 = Newport

6 = Baron

0 0 5

mm Longer than

★ 1

7 = Mystic

8 = Sabre

9 = Reubens

★ 1

Color (at 50% flowering):

1 = Not red (Fylking)

2 = Red (Nugget)

2

Shape of Rachis (opposite lower side branches):

1 = No bend (Nugget)

2 = Bend (Merion)

★ 2

Collar:

1 = Opened (Nugget)

2 = Closed (Merion)

★ 2

Branches Attitude (Lowest whorl):

1 = Drooping (America, Prato)

2 = Horizontal (Merion)

3 = Ascending (Tundra)

4.4

Number of main branches in lowest whorl:

★ 1.5

Panicle habit:

1 = Nodding (Newport)

2 = Upright (Nugget)

★ 1

Panicle type:

1 = Open

2 = Intermediate

3 = Compact

1

Anther color (anthesis):

1 = Purple

2 = Yellow

3 = Brown

9.

LEMMA

★ 3

Keel

1 = Glabrous

2 = Slightly pubescent

3 = Pubescent

★ 3

Marginal Nerves

1

Intermediate Nerves:

1 = Distinct

2 = Obscure

3

Basal Webbing:

1 = Absent

2 = Scant (Baron)

3 = Copious (Merion)

## 10. SEED: (Floret-not dehulled)

★  Apomixis Percentage: 1 = more than 95 2 = 85 to 95 3 = less than 85 Phenol Reaction: 1 = none-lemma removed (Merion) 2 = Beige (Cougar) 3 = Brown (Windsor)  
4 = Black (Mystic -2hrs) 5 = Black (-24hrs) mm Width (average of 10)  mm Length Milligrams per 10,000 seed Milligrams less than

Weight same as

 Milligrams more than Weight Class (g per 10,000 seed): 1 = Light (< 3g Sydsport, Merion)  
2 = Medium (3g - 4g Adelphi, Parade)  
3 = Heavy (> 4g Fylking, Nugget)★   
★   
★  } 1 = Nugget 2 = Fylking 3 = Delta  
4 = Merion 5 = Newport 6 = Baron  
7 = Mystic 8 = Sabre 9 = Reubens

## 11. ENVIRONMENTAL RESISTANCE:

(0 = Not Tested; 1 = Very Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Highly Resistant)

★  Cool Temperature (Winter color)  Cold (injury)  Heat  Drought  
 Shade  Low Fertility  Acid Soil (< pH 5.5)  Alkalinity (pH > 7.5)  
 Salinity  Soil Compaction  Poor Drainage  Air Pollution  
 Other (Please Specify):

## 12. DISEASE RESISTANCE:

(0 = Not Tested; 1 = Very Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Highly Resistant)

 Melting-Out *Drechslera poae* (*Helminthosporium vagans*)  Sclerotinia *S. borealis*  
 Helminthosporium Leaf Spot *Bipolaris sorokiniana*  Stem Rust *Puccinia graminis*  
 Brown Patch *Rhizoctonia solani*  Stripe Rust *P. striiformis*  
 Powdery Mildew *Erysiphe graminis*  Leaf Rust *P. poae-nemoralis*  
 Stripe Smut *Ustilago striiformis*  Orange Stripe Rust *P. poarum*  
 Flag Smut *Urocystis agropyri*  Pythium Blight *Pythium* spp.  
 Pink Snow Mold *Fusarium nivale*  Red Thread *Corticium fujiciforme*  
 Ergot *Claviceps purpurea*  Other (Please Specify): *Rhizoctonia zeae*  
 Fusarium Blight *Fusarium roseum*, *F. tricinctum*  Other (Please Specify):  
 Typhula Blight *Typhula* spp.  
 Dollar Spot *Sclerotinia homoeocarpa*



## 13. INSECTS, NEMATODES, RESISTANCE:

(0 = Not Tested; 1 = Very Susceptible, 2 = Moderately Susceptible, 3 = Moderately Resistant, 4 = Highly Resistant)

- ☒ 3 Chinch Bug *Blissus* spp. (give species: )
- ☐ 0 Sod Webworm *Crambus* spp. (give species:)
- ☒ 3 Bluegrass Billbug *Sphenophorus parvulus*
- ☐ 0 White Grub: Japanese Beetle, Chafers (give species )
- ☐ 0 Greenbug Aphid *Schizaphis graminum*
- ☐ Other (Please Specify):
- ☐ Other (Please Specify):

14. Give variety or varieties that most closely resemble the application variety. For the following characteristics indicate Degree of Resemblance by placing in the column marked D.R., one of the following numbers: 1 = Application variety is less than comparison variety; 2 = Same as; 3 = More than, better, greater, darker, more disease resistant, etc.

CHARACTER	VARIETY	D.R.	CHARACTER	VARIETY	D.R.
Maturity-heading	Midnight	1	Leaf Width	Midnight	3
Height	Midnight	1	Leaf Color Spring	Midnight	3
Seed Size	Midnight	3	Leaf Color Summer	Midnight	3
Seed Weight	Midnight	3	Leaf Color Winter	Midnight	3
Cold Injury	Midnight	2	Drought	Midnight	3
Heat	Midnight	2	Disease**		
Shade	Midnight	3	Stripe Rust	Midnight	3

\*\*Specify each disease evaluated.

## 15. ADDITIONAL DESCRIPTION

Describe all characteristics and conditions that cannot be adequately described in this form in Exhibit D.

## Exhibit D

**Additional Description of 'Midnight Star' Kentucky Bluegrass**

1. Midnight Star has shown good resistance to stripe rust (Tables 4, 5).
2. Midnight Star has shown moderate resistance to stem rust (Table 5).
3. Midnight Star has shown good turf quality in U.S. trials (Tables 5-8).
4. Midnight Star has shown good resistance to Rhizoctonia sheath spot (Table 6).
5. Midnight Star has shown moderate salt tolerance (Table 9).

Table 1. 2002 mean morphological measurements for entries in a Kentucky bluegrass seed yield trial seeded fall of 2001 near Hubbard, OR.

Entry	Plant Height (cm)	Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Tiller Leaf Sheath Length (cm)	Panicle Length (cm)	Flag Leaf to Panicle Top (cm)	Branches/ Lowest Whorl (#)	Tiller Leaf Length (cm)	Tiller Leaf Width (mm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Tillers/ 12.7 cm Row (#)
Julia	81.7	46.4	11.9	7.7	10.0	34.5	3.7	8.1	3.1	6.5	2.7	67.9
<b>Midnight Star</b>	<b>68.5</b>	<b>31.0</b>	<b>11.8</b>	<b>7.2</b>	<b>8.2</b>	<b>30.5</b>	<b>4.4</b>	<b>8.4</b>	<b>4.4</b>	<b>5.9</b>	<b>3.6</b>	<b>93.0</b>
Nugget	58.5	27.9	9.9	5.7	7.7	31.2	3.5	5.7	2.5	4.6	2.1	38.2
Midnight	45.7	23.7	8.6	7.3	7.1	22.2	3.8	7.4	3.0	4.5	2.1	44.2
<b>LSD (0.05)</b>	<b>2.2</b>	<b>1.8</b>	<b>0.6</b>	<b>0.5</b>	<b>0.6</b>	<b>1.5</b>	<b>0.3</b>	<b>0.5</b>	<b>0.3</b>	<b>0.4</b>	<b>0.2</b>	<b>12.2</b>

Table 2. 2000 mean morphological measurements for entries in a Kentucky bluegrass seed yield trial seeded fall of 1999 near Hubbard, OR.

Entry	Plant Height (cm)	Flag Leaf Height (cm)	Flag Leaf Sheath Length (cm)	Tiller Leaf Sheath Length (cm)	Panicle Length (cm)	Flag Leaf to Panicle Top (cm)	Branches/ Lowest Whorl (#)	Tiller Leaf Length (cm)	Tiller Leaf Width (mm)	Flag Leaf Length (cm)	Flag Leaf Width (mm)	Tillers/ 12.7 cm Row (#)
Julia	75.5	44.1	10.7	5.1	8.7	33.9	3.3	8.0	2.4	5.4	2.0	55.1
<b>Midnight Star</b>	<b>65.4</b>	<b>29.3</b>	<b>10.0</b>	<b>7.3</b>	<b>6.6</b>	<b>36.9</b>	<b>4.1</b>	<b>7.0</b>	<b>2.9</b>	<b>4.1</b>	<b>2.5</b>	<b>64.2</b>
Midnight	44.5	21.7	7.6	6.1	6.4	24.4	3.3	5.7	2.5	4.4	2.0	28.8
<b>LSD (0.05)</b>	<b>2.8</b>	<b>3.1</b>	<b>0.6</b>	<b>0.5</b>	<b>0.4</b>	<b>2.6</b>	<b>0.3</b>	<b>0.5</b>	<b>0.2</b>	<b>0.4</b>	<b>0.2</b>	<b>12.3</b>

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Table 3. 2002 mean initial heading dates for entries in a Kentucky bluegrass seed yield trial seeded fall of 2001 near Hubbard, OR.

Entry	Mean
Midnight	14 May
<b>Midnight Star</b>	<b>1 May</b>
Julia	26 April
Baron	19 April

LSD (0.05) 3 days

Table 4. 1998 mean stripe rust ratings and initial heading dates for entries in a Kentucky bluegrass seed yield trial seeded fall of 1997 near Hubbard, OR.

Entry	Stripe Rust	Heading Date
Midnight	1.5 <sup>1</sup>	12 May
<b>Midnight Star</b>	<b>6.0</b>	<b>28 April</b>
Stolla	1.5	28 April

LSD (0.05) 1.9 6 days

<sup>1</sup>9 = no disease

Table 5. Mean stripe rust, stem rust, and turf quality ratings for entries in a Kentucky bluegrass turf trial seeded Dec 2000 near Camarillo, CA.

Entry	Stripe Rust 18 May 01	Stem Rust			Turf Quality		
		18 May 01	26 Jul 01	Mean	2001	2002	Mean
North Star	8.0 <sup>2</sup>	6.7 <sup>2</sup>	6.3	6.5	7.2 <sup>3</sup>	7.6	7.4
<b>Midnight Star</b>	<b>8.3</b>	<b>6.3</b>	<b>4.3</b>	<b>5.3</b>	<b>5.4</b>	<b>5.8</b>	<b>5.6</b>
Midnight	6.3	4.3	4.0	4.2	4.7	5.9	5.3
Voyager	8.0	8.7	6.3	7.5	4.2	5.0	4.6
<b>LSD (0.05)</b>	<b>2.1</b>	<b>1.9</b>	<b>2.1</b>	<b>1.6</b>	<b>1.0</b>	<b>0.9</b>	<b>0.8</b>

<sup>1</sup>9 = 100% established<sup>2</sup>9 = no disease<sup>3</sup>9 = idealTable 6. 2002 mean Rhizoctonia sheath spot (*R. zeae*) and turf quality ratings for entries in a Kentucky bluegrass turf trial seeded fall of 2001 near Rolesville, NC and maintained at 1.0" mowing height.

Entry	<i>R. zeae</i> 5 Aug	Turf Quality				
		Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Mean
Moonlight	7.3 <sup>1</sup>	6.2 <sup>2</sup>	7.5	6.6	6.9	6.8
Midnight	6.3	6.2	6.1	6.6	7.1	6.5
<b>Midnight Star</b>	<b>6.7</b>	<b>5.2</b>	<b>6.1</b>	<b>5.8</b>	<b>5.9</b>	<b>5.7</b>
Julia	4.7	6.2	5.6	5.3	4.7	5.4
Ascot	5.0	5.0	4.9	5.2	4.8	5.0
A6-20	3.0	5.3	3.6	3.3	2.1	3.6
<b>LSD (0.05)</b>	<b>1.9</b>	<b>1.2</b>	<b>1.3</b>	<b>1.3</b>	<b>1.8</b>	<b>1.0</b>

<sup>1</sup>9 = no disease<sup>2</sup>9 = ideal

Table 7. Mean turf quality ratings for entries in a Kentucky bluegrass turf trial seeded fall of 2000 near Rolesville, NC and maintained at 2", 1", 0.75" and 0.5" mowing heights.

Entry	2001	2002					01-02 Mean
	(2")	Apr-Aug (2")	Sep-Oct (1")	4 Nov (0.75")	Nov-Dec (0.5")	Mean	
Moonlight	6.5 <sup>1</sup>	5.6	5.9	6.0	7.2	6.2	6.4
Midnight	6.5	5.2	5.0	6.7	7.2	6.0	6.2
<b>Midnight Star</b>	<b>5.4</b>	<b>5.8</b>	<b>6.0</b>	<b>7.0</b>	<b>7.0</b>	<b>6.5</b>	<b>5.9</b>
Baron	5.1	3.9	3.9	3.3	4.2	3.8	4.4
Julia	4.3	4.4	3.6	5.0	4.5	4.4	4.3
Kenblue	2.3	2.6	3.4	3.3	3.5	3.2	2.8
<b>LSD (0.05)</b>	<b>0.8</b>	<b>1.1</b>	<b>1.5</b>	<b>1.8</b>	<b>1.6</b>	<b>1.2</b>	<b>0.7</b>

<sup>1</sup>9 = ideal

Table 8. Mean turf quality ratings for entries in a Kentucky bluegrass turf trial seeded fall of 2000 near Hubbard, OR.

Entry	2001	2002	Mean
North Star	6.3 <sup>1</sup>	5.9	6.1
Baron	5.3	5.4	5.4
Midnight	4.9	5.4	5.3
Julia	5.2	5.3	5.2
<b>Midnight Star</b>	<b>4.2</b>	<b>4.3</b>	<b>4.2</b>
Kenblue	3.0	3.1	3.0
<b>LSD (0.05)</b>	<b>0.7</b>	<b>0.8</b>	<b>0.6</b>

<sup>1</sup>9 = ideal

Table 9. 2001 mean salt damage ratings for Kentucky bluegrass entries screened at 10,000 ppm NaCl for eight weeks in a greenhouse salt bath.

Entry	Mean
Moonlight	1.3 <sup>1</sup>
Midnight	2.3
Baron	2.4
<b>Midnight Star</b>	<b>2.9</b>
Kenblue	3.8
<b>LSD (0.05)</b>	<b>0.4</b>

<sup>1</sup>0 = no damage  
1 = 1-25% damage

2 = 25.1-50% damage  
3 = 50.1-75% damage

4 = 75.1-99.9% damage  
5 = dead

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP***The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C.652a) and the Paperwork Reduction Act (PRA) of 1995.**Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).*

1. NAME OF APPLICANT(S) <b>Pure Seed Testing, Inc.</b>	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER <b>PST-A6-214</b>	3. VARIETY NAME <b>Midnight Star</b>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) <b>PO Box 449 Hubbard, OR 97032</b>	5. TELEPHONE (include area code) <b>503-263-0719</b>	6. FAX (include area code) <b>503-263-0703</b>
7. PVPO NUMBER <b>#200300149</b>		

8. Does the applicant own all rights to the variety? Mark an "X" in appropriate block. If no, please explain. ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. national or U.S. based company?  
If no, give name of country ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO *If no, please answer the following:*

a. If original rights to variety were owned by individual(s), is (are the original owner(s) a U.S. national(s)?

☐ YES ☐ NO *If no, give name of country*

b. If original rights to variety were owned by a company, is the original owner(s) a U.S. based company?

☐ YES ☐ NO *If no, give name of country*

11. Additional explanation on ownership (If needed, use reverse for extra space):

**Pure Seed Testing, Inc. has licensed Midnight Star to Turf Seed, Inc.****PLEASE NOTE:**

Plant variety protection can be afforded only to owners (now licensees) who meet one of the following criteria:

- If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- If the applicant is an owner who is not the original breeder, both the original breeder and the applicant must meet one of the above criteria.

The original breeder may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

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